

Speciation Analysis of Arsenic by HPLC–UV in Highly Contaminated Water Samples

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High performance liquid chromatography with UV detection at 191 nm was applied to determine four arsenic species: inorganic As(III) and As(V), monomethylarsonic acid (MMA), and dimethylarsinic acid (DMA) in water samples. For separation of arsenic compounds anion-exchange column was used. The influence of several parameters, such as the composition of mobile phase and the flow rate on the separation efficiency and the wavelength on detection sensitivity were investigated. The described method was applied to determine arsenic species in highly contaminated water samples. To validate the proposed method, determination of arsenic was performed simultaneously by ICP–MS method.